



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,998	11/18/2003	Scott R. Presnell	98-55D2	5205

10117 7590 01/24/2007
ZYMOTENETICS, INC.
INTELLECTUAL PROPERTY DEPARTMENT
1201 EASTLAKE AVENUE EAST
SEATTLE, WA 98102-3702

EXAMINER

SEHARASEYON, JEGATHEESAN

ART UNIT	PAPER NUMBER
----------	--------------

1647

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/715,998	Applicant(s) PRESNELL ET AL.	
	Examiner Jegatheesan Seharaseyon, Ph.D	Art Unit 1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/18/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of the species (k), directed to an immunoglobulin Fc domain fusion protein in the reply filed on 11/03/2006 is acknowledged. Claims 1-45 are pending and under consideration.

Priority

2. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows: This application is claiming the benefit of prior-filed non provisional application Nos. 60/100, 896, 60/123, 546 and 60/142, 574 under 35 U.S.C. 119(e). Copendency between the current application and the prior application is required. Since the applications are not copending, the benefit claim to the prior-filed non-provisional application is improper. Applicant is required to delete the reference to the prior-filed application from the first sentence(s) of the specification, or the application data sheet, depending on where the reference was originally submitted, unless applicant can establish copendency between the applications.

3. This application appears to be a division of Application No. 09/404, 641, filed September 23, 1999. A later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming only subject matter disclosed in an earlier or parent application is known as a divisional application or "division." The divisional application should set forth the portion of the earlier disclosure that is germane to the invention as claimed in the divisional application.

4. Applicant is required to update the current status of 10/414, 186 in the first paragraph of the Application.

Drawings

5. The drawings filed 11/18/2003 are acknowledged.

Information Disclosure Statement

6. The IDS submitted 11/18/2003 has been considered.

Specification

7. The use of the trademark human Multiple Tissue Northern Blots (p.76), QiaexII (p. 76), glutaMax (p.80), ElectroMAX (p.80), Qiaquick (p.82), Expresshyb (p.114) and Hybond-N (p.114) etc. have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

8. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (see p. 74 and 78). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

9. Claims 1, 3, 12, 22, 23, 24 and 39 are objected to because of the following informalities: It is suggested that the claim be rewritten to better clarify the invention.

9a. In claim 1, "An isolated polynucleotide encoding a polypeptide consisting of a sequence of amino acid residues selected from...." rewritten as "An isolated polynucleotide encoding a polypeptide consisting of a sequence selected from...."

9b. In claim 3, "An isolated polynucleotide encoding a polypeptide consisting of a sequence of amino acid residues selected from...." rewritten as "An isolated polynucleotide encoding a polypeptide consisting of a sequence selected from...."

9c. In claim 12, "An isolated polynucleotide encoding a polypeptide consisting of a sequence of amino acid residues selected from...." rewritten as "An isolated polynucleotide encoding a polypeptide consisting of a sequence selected from...."

9d. In claim 22, "An isolated polynucleotide comprising a sequence of polynucleotides selected from...." rewritten as "An isolated polynucleotide comprising of a sequence selected from...."

9e. In claim 23, "The isolated polynucleotide according to claim 22, wherein the polynucleotide consists of a sequence of polynucleotides selected from...." rewritten as "The isolated polynucleotide according to claim 22, wherein the polynucleotide consists of a sequence selected from."

Art Unit: 1647

9f. In claim 24, "An isolated polynucleotide consists of a sequence of polynucleotides that is selected from...." rewritten as "An isolated polynucleotide consists of a sequence that is selected from...."

9g. In claim 39, "A DNA construct encoding a fusion protein, the DNA construct comprising: a first DNA segment encoding a polypeptide consisting of a sequence of amino acid residues selected from..." re written as "A DNA construct encoding a fusion protein, the DNA construct comprising: a first DNA segment encoding a polypeptide consisting of a sequence selected from....".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10a. Claims 1-45 are rejected under 35 U.S.C. 112, first paragraph, because the specification while enabling for polynucleotide sequence of SEQ ID NO: 1 or polynucleotide sequence of SEQ IDNO: 1 from nucleotide 1 to nucleotide 1682 or polynucleotide sequence of SEQ IDNO: 1 from nucleotide 1 to nucleotide 779 or polynucleotide sequence of SEQ IDNO: 1 from nucleotide 1 to nucleotide 833 or polynucleotide sequence of SEQ IDNO: 1 from nucleotide 1 to nucleotide 2887 or polynucleotide sequence of SEQ IDNO: 834 from nucleotide 1 to nucleotide 2887 polynucleotide sequence of SEQ IDNO: 1 from nucleotide 126 to nucleotide 779 or

Art Unit: 1647

polynucleotide sequence of SEQ IDNO: 1 from nucleotide 126 to nucleotide 833 or
polynucleotide sequence of SEQ IDNO: 1 from nucleotide 834 to nucleotide 1682 or
polynucleotide sequence of SEQ IDNO: 1 from nucleotide 126 to nucleotide 1682 or
nucleotide sequence encoding SEQ ID NO: 2 from amino acid 20 to amino acid 237 or
nucleotide sequence encoding SEQ ID NO: 2 from amino acid 20 to amino acid 255 or
nucleotide sequence encoding SEQ ID NO: 2 from amino acid 256 to amino acid 538 or
nucleotide sequence encoding SEQ ID NO: 2 from amino acid 20 to amino acid 538 or
polynucleotide sequences complementary, does not reasonably provide enablement for
all possible nucleotide fragments contemplated by the Applicant. The claims also recite
the phrases "a polynucleotide sequence" and "a polypeptide" and thus, are broadly
interpreted by the Examiner as reading upon: (i) fragments of SEQ ID NOs: 1-2,
including sequences only 10 amino acids or 60 nucleic acids in length (see specification
page 12 and page 23). The specification does not enable any person skilled in the art to
which it pertains, or with which it is most nearly connected, to make and use the
invention as claimed.

The test of enablement is not whether any experimentation is necessary, but
whether, if experimentation is necessary, it is undue. See *In re Wands*, 858 F.2d at 737,
8 USPQ2d at 1404. The factors to be considered when determining whether there is
sufficient evidence to support a determination that a disclosure does not satisfy the
enablement requirement and whether any necessary experimentation is "undue"
include, but are not limited to: (1) the breadth of the claims; (2) the nature of the
invention; (3) the state of the prior art; (4) the level of one of ordinary skill; (5) the level

Art Unit: 1647

of predictability in the art; (6) the amount of direction provided by the inventor; (7) the existence of working examples; and (8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The instant claims reads on polynucleotide sequence fragments of SEQ ID NO: 1 and polynucleotides encoding SEQ ID NO: 2. The claims recite the phrases "a polynucleotide sequence" and "a polypeptide" and thus, are broadly interpreted by the Examiner as reading upon: (i) fragments of SEQ ID NOs: 1-2, including sequences only 10 amino acids or 60 nucleic acids in length (see specification page 12 and page 23). In addition, Applicant has not defined in the specification if "complementary" describes a full-length complementary sequence and thus the Examiner has interpreted it to include fragments that are at least 60 nucleic acids long.

However, other than the nucleic acid sequence of SEQ ID NO: 1, nucleic acid encoding polypeptide of SEQ ID NO: 2, the specific fragments of the polynucleotide sequence of SEQ ID NO: 1 and polynucleotide sequence encoding SEQ ID NO: 2 disclosed in the instant claims, the specification as filed fails to disclose any other sequence contemplated in the instant claim such as "a polynucleotide sequence" and "a polypeptide". The specification does not teach functional or structural characteristics of the polynucleotide and polypeptide fragments encompassed by the claims.

Despite knowledge in the art for producing variant polynucleotide that encode polypeptides, the specification fails to provide any guidance regarding the variant polynucleotide sequences encoding the polypeptides by the contemplated methods that retain the function. Furthermore, detailed information regarding the structural and

Art Unit: 1647

functional requirements of the disclosed protein is lacking. Although it is accepted that the amino acid sequence of a polypeptide determines its structural and functional properties, predicting a protein's structure and function from mere sequence data remains an elusive task. The problem of predicting protein structure from sequence data and in turn utilizing predicted structural determinations to ascertain functional aspects of the protein is extremely complex. While it is known that many amino acid substitutions are generally possible in any given protein the positions within the protein's sequence where such amino acid substitutions can be made with a reasonable expectation of success are limited. Certain positions in the sequence are critical to the protein's structure/function relationship, e.g. such as various sites or regions directly involved in binding, activity and in providing the correct three-dimensional spatial orientation of binding and active sites. These or other regions may also be critical determinants of antigenicity. These regions can tolerate only relatively conservative substitutions or no substitutions (see Wells, 1990, *Biochemistry* 29:8509-8517; Ngo et al., 1994, *The Protein Folding Problem and Tertiary Structure Prediction*, pp. 492-495). However, Applicant has provided little or no guidance beyond the mere presentation of sequence data to enable one of ordinary skill in the art to determine, without undue experimentation, the positions in the protein which are tolerant to change (e.g. such as by amino acid substitutions or deletions), and the nature and extent of changes that can be made in these positions. Although the specification outlines art-recognized procedures for producing and screening for active variants, this is not adequate guidance as to the nature of active derivatives that may be constructed, but is merely an

Art Unit: 1647

invitation to the artisan to use the current invention as a starting point for further experimentation. Even if an active or binding site were identified in the specification, they may not be sufficient, as the ordinary artisan would immediately recognize that an active or binding site must assume the proper three-dimensional configuration to be active, which conformation is dependent upon surrounding residues; therefore substitution of non-essential residues can often destroy activity. Therefore, predicting which polypeptide, if any, would retain the functions of the protein is well outside the realm of routine experimentation. Further, since no function has been attributed to the claimed protein, the skilled artisan would not know what function to test for. Thus, an undue amount of experimentation would be required to generate the changes/modifications contemplated and yet retain the function of the proteins claimed.

Applicant has not taught how one of skill in the art would use the full scope of polynucleotide sequences encompassed by the invention of claims 1-45. The specification as filed does not sufficiently teach one of skill in the art how to make and/or use the full scope of the claimed sequences. The amount of experimentation required to make and/or use the full scope of the claimed sequences would require trial and error experimentation to determine the functional sequences.

Given the breadth of claims 1-45 in light of the unpredictability of the art as determined by the lack of working examples and shown by the prior art of record, the level of skill of the artisan, and the lack of guidance provided in the instant specification, it would require undue experimentation for one of ordinary skill in the art to make and

Art Unit: 1647

use the claimed invention. Claims 26-29, 31-38 and 40-45 are rejected insofar as they are dependent on rejected claims 25, 30 and 39.

10b. Claims 1-45 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. *This is a written description rejection.*

The specification discloses the polynucleotide sequence of SEQ ID NO: 1, polynucleotide sequence encoding SEQ ID NO: 2, the specific fragments of the polynucleotide sequence of SEQ ID NO: 1 and polynucleotide sequence encoding SEQ ID NO: 2 disclosed in the claims. This meets the written description provisions of 35 USC 112, first paragraph. However, the specification does not disclose all possible polynucleotide fragments of SEQ ID NO: 1 and fragments of polynucleotides encoding SEQ ID NO: 2 contemplated by the Applicant. The claims recite the phrases "a polynucleotide sequence" and "a polypeptide" and thus, are broadly interpreted by the Examiner as reading upon: (i) fragments of SEQ ID NOs: 1-2, including sequences only 10 amino acids or 60 nucleic acids in length (see specification page 12 and page 23). In addition, Applicant has not defined in the specification if "complementary" describes a full-length complementary sequence and thus the Examiner has interpreted it to include fragments that are at least 60 nucleic acids long.

The claims as written, however, encompass variant sequences which were not originally contemplated and fail to meet the written description provision of 35 USC 112, first paragraph because the written description is not commensurate in scope with the recitation of claims 1-45. The specification does not provide written description to support the genus encompassed by the instant claims.

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that “applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the ‘written description’ inquiry, *whatever is now claimed*.” (See page 1117.) The specification does not “clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed” (See *Vas-Cath* at page 1116).

With the exception of the nucleic acid sequence of SEQ ID NO: 1, nucleic acid encoding polypeptide of SEQ ID NO: 2, the specific fragments of the polynucleotide sequence of SEQ ID NO: 1 and polynucleotide sequence encoding SEQ ID NO: 2 disclosed in the instant claims, the specification as filed fails to disclose any other sequence contemplated in the instant claim such as “a polynucleotide sequence” and “a polypeptide”. Thus, the skilled artisan cannot envision all the detailed chemical structure of the claimed polynucleotide sequences regardless of the complexity or simplicity of the method of isolation.

Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it. The polypeptide itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (CAFC 1993) and *Amgen Inc. V. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016. One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481, 1483. In *Fiddes v. Baird*, claims directed to mammalian FGF’s were found unpatentable due to lack of written description for the broad class.

Therefore, only the nucleic acid sequence of SEQ ID NO: 1, nucleic acid encoding polypeptide of SEQ ID NO: 2, the specific fragments of the polynucleotide

Art Unit: 1647

sequence of SEQ ID NO: 1 and polynucleotide sequence encoding SEQ ID NO: 2 disclosed in the instant claims, but not the full breadth of the claims meets the written description provision of 35 USC 112, first paragraph. The species specifically disclosed are not representative of the genus because the genus is highly variant. As a result, it does not appear that the inventors were in possession of various polynucleotide sequences set forth in claims 1-45. Claims 26-29, 31-38 and 40-45 are rejected insofar as they are dependent on rejected claims 25, 30 and 39.

Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 USC 112 is severable from its enablement provision. (See page 1115.) Applicants are directed to the Revised Interim Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 64, No. 244, pages 71427-71440, Tuesday December 21, 1999.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Art Unit: 1647

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11a. Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Donaldson et al. (U. S. Patent No. 6, 057, 128, PTO1449 of 11/18/2003).

Claims are drawn to isolated nucleic acids, vectors, host cells and a method of producing a polypeptide. The claims recite the phrases "a polynucleotide sequence" and "a polypeptide" and thus, are broadly interpreted by the Examiner as reading upon: (i) fragments of SEQ ID NOs: 1-2, including sequences only 10 amino acids or 60 nucleic acids in length (see specification page 12 and page 23). In addition, Applicant has not defined in the specification if "complementary" describes a full-length complementary sequence and thus the Examiner has interpreted it to include fragments that are at least 60 nucleic acids long.

Donaldson et al. discloses polynucleotide sequence (SEQ ID NO: 1) that has 100% identity to SEQ ID NO: 1 from nt 51-2475 of the instant invention (see Appendix A1-A5). Further, it also discloses nucleotides encoding SEQ ID NO: 2 has greater than 99.9% identity to nucleotides 103-1602 of SEQ ID NO: 1 of the instant invention (see Appendix B1-4). Thus, the reference anticipates the various variants and fragments of the instant invention. The functional activities recited in the instant claims are inherent to the polypeptide. The fusion protein comprises an antibody fragment, such as an Fc fragment (column 2, lines 32-33). Donaldson et al. vectors, host cells and a method of making the protein (column 4). Therefore, claims 1-45 are rejected as being anticipated by Donaldson et al. (U. S. Patent No. 6, 057, 128, PTO1449 of 11/18/2003).

Art Unit: 1647

11b. Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Presnell et al. (U. S. Patent No. 6, 576, 744).

Claims are drawn to isolated nucleic acids, vectors, host cells and a method of producing a polypeptide. The claims recite the phrases "a polynucleotide sequence" and "a polypeptide" and thus, are broadly interpreted by the Examiner as reading upon: (i) fragments of SEQ ID NOs: 1-2, including sequences only 10 amino acids or 60 nucleic acids in length (see specification page 12 and page 23). In addition, Applicant has not defined in the specification if "complementary" describes a full-length complementary sequence and thus the Examiner has interpreted it to include fragments that are at least 60 nucleic acids long.

Presnell et al. teach polynucleotide of SEQ ID NO: 1, polypeptide of SEQ ID NO: 2. The reference also discloses various nucleotide fragments encoded by SEQ ID NO: 2 contemplated by the instant invention (see columns 2-5, 10 and claims) and fusion proteins with the various activities. Presnell et al. vectors, host cells and a method of making the protein (columns 25-30). Therefore, claims 1-45 are rejected as being anticipated by Presnell et al. (U. S. Patent No. 6, 576, 744).

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

Art Unit: 1647

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12a. Claims 1-21 and 25-45 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-36 of copending Application No. 11/537, 874. Although the conflicting claims are not identical, they are not patentably distinct from each other because WSXWS is within SEQ ID NO: 2. Further art recognizes that mannosylation occurs at Trp residues of WSXWS motifs.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12b. Claims 1-21 and 25-45 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 11/537, 879. Although the conflicting claims are not identical, they are not patentably distinct from each other because WSXWS is within SEQ ID NO: 2. Further art recognizes that mannosylation occurs at Trp residues of WSXWS motifs.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

13. No claims are allowable.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jegatheesan Seharaseyon, Ph.D whose telephone number is 571-272-0892. The examiner can normally be reached on M-F: 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571-272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 10/715,998

Page 17

Art Unit: 1647

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

Art Unit 1647

January 18, 2007

**CHRISTINE J. SAOUD
PRIMARY EXAMINER**

Christine J. Saoud

Appendix A

Applicant's copy

SCORE Search Results Details for Application 10715998 and Search Result \$itemName.

[Score Home Page](#) [Retrieve Application List](#) [SCORE System Overview](#) [SCORE FAQ](#) [Comments / Suggestions](#)

This page gives you Search Results detail for the Application 10715998 and Search Result \$itemName. [start](#) | [next page](#)

[Go Back](#)

```

                Qy          2579 GGTTTCCAGGCTTAAATCAGTCCGTTTCGTCTCTTGAAACAGCTC
                |||
Db      2581 GGTTTCCAGGCTTAAATCAGTCCGTTTCGTCTCTTGAAACAGCTCCCCACCAACCAAG 2640

Qy      2639 ATTTCTTTTCTAACTTCTGCTACTAAGTTTTTAAAAATTCCTTTATGCACCCAAGAGA 2698
                |||
Db      2641 ATTTCTTTTCTAACTTCTGCTACTAAGTTTTTAAAAATTCCTTTATGCACCCAAGAGA 2700

Qy      2699 TATTTATTAAACACCAATTACGTAGCAGGCCATGGCTCATGGGACCCACCCCCCGTGGCA 2758
                |||
Db      2701 TATTTATTAAACACCAATTACGTAGCAGGCCATGGCTCATGGGACCCACCCCCCGTGGCA 2760

Qy      2759 CTCATGGAGGGGGTGCAGGTTGGAATATGCAGTGTGCTCCGGCCACACATCCTGCTGG 2818
                |||
Db      2761 CTCATGGAGGGGGTGCAGGTTGGAATATGCAGTGTGCTCCGGCCACACATCCTGCTGG 2820

Qy      2819 GCCCCCTACCCTGCCCAATTCAATCCTGCCAATAAATCCTGTCTTATTGTTCATCCTG 2878
                |||
Db      2821 GCCCCCTACCCTGCCCAATTCAATCCTGCCAATAAATCCTGTCTTATTGTTCATCCTG 2880

Qy      2879 GAGAATTGA 2887
                |||
Db      2881 GAGAATTGA 2889

```

RESULT 5

US-09-040-005-1

; Sequence 1, Application US/09040005

; Patent No. 6057128

; GENERAL INFORMATION:

; APPLICANT: Donaldson, Debra

; APPLICANT: Unger, Michelle

; TITLE OF INVENTION: MU-1 RECEPTOR

; NUMBER OF SEQUENCES: 8

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Genetics Institute, Inc.

; STREET: 87 Cambridge Park Drive

; CITY: Cambridge

; STATE: MA

; COUNTRY: USA

; ZIP: 02140

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/040,005

; FILING DATE:

BEST AVAILABLE COPY

Appendix A2

Applicants wjy

```

; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
;   NAME: Brown, Scott A
;   REGISTRATION NUMBER: 32,724
;   REFERENCE/DOCKET NUMBER: GI5320
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE: 617-498-8224
;   TELEFAX: 617-876-5851
; INFORMATION FOR SEQ ID NO: 1:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH: 2665 base pairs
;     TYPE: nucleic acid
;     STRANDEDNESS: double
;     TOPOLOGY: linear
;   MOLECULE TYPE: cDNA
US-09-040-005-1

```

Query Match 84.0%; Score 2425; DB 3; Length 2665;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 2425; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

Qy      51 AGGCCCGTGGGAGTCAGCATGCCGCGTGGCTGGGCGCCCCCTTGCTCCTGCTGCTGCTC 110
      |||
Db     218 AGGCCCGTGGGAGTCAGCATGCCGCGTGGCTGGGCGCCCCCTTGCTCCTGCTGCTGCTC 277

Qy     111 CAGGGAGGCTGGGGCTGCCCCGACCTCGTCTGCTACACCGATTACCTCCAGACGGTCATC 170
      |||
Db     278 CAGGGAGGCTGGGGCTGCCCCGACCTCGTCTGCTACACCGATTACCTCCAGACGGTCATC 337

Qy     171 TGCATCCTGGAAATGTGGAACCTCCACCCCAGCACGCTCACCTTACCTGGCAAGACCAG 230
      |||
Db     338 TGCATCCTGGAAATGTGGAACCTCCACCCCAGCACGCTCACCTTACCTGGCAAGACCAG 397

Qy     231 TATGAAGAGCTGAAGGACGAGGCCACCTCCTGCAGCCTCCACAGGTCGGCCCAATGCC 290
      |||
Db     398 TATGAAGAGCTGAAGGACGAGGCCACCTCCTGCAGCCTCCACAGGTCGGCCCAATGCC 457

Qy     291 ACGCATGCCACCTACACCTGCCACATGGATGTATTCCACTTCATGGCCGACGACATTTTC 350
      |||
Db     458 ACGCATGCCACCTACACCTGCCACATGGATGTATTCCACTTCATGGCCGACGACATTTTC 517

Qy     351 AGTGTCAACATCACAGACCAGTCTGGCAACTACTCCCAGGAGTGTGGCAGCTTTCTCCTG 410
      |||
Db     518 AGTGTCAACATCACAGACCAGTCTGGCAACTACTCCCAGGAGTGTGGCAGCTTTCTCCTG 577

Qy     411 GCTGAGAGCATCAAGCCGGCTCCCCCTTTCAACGTGACTGTGACCTTCTCAGGACAGTAT 470
      |||
Db     578 GCTGAGAGCATCAAGCCGGCTCCCCCTTTCAACGTGACTGTGACCTTCTCAGGACAGTAT 637

Qy     471 AATATCTCCTGGCGCTCAGATTACGAAGACCCTGCCTTCTACATGCTGAAGGGCAAGCTT 530
      |||
Db     638 AATATCTCCTGGCGCTCAGATTACGAAGACCCTGCCTTCTACATGCTGAAGGGCAAGCTT 697

Qy     531 CAGTATGAGCTGCAGTACAGGAACCGGGGAGACCCCTGGGCTGTGAGTCCGAGGAGAAAG 590
      |||
Db     698 CAGTATGAGCTGCAGTACAGGAACCGGGGAGACCCCTGGGCTGTGAGTCCGAGGAGAAAG 757

Qy     591 CTGATCTCAGTGGACTCAAGAAGTGTCTCCCTCCTCCCCCTGGAGTTCCGCAAAGACTCG 650
      |||
Db     758 CTGATCTCAGTGGACTCAAGAAGTGTCTCCCTCCTCCCCCTGGAGTTCCGCAAAGACTCG 817

```

Appendix A3

Applicants copy

Qy	651	AGCTATGAGCTGCAGGTGCGGGCAGGGCCCATGCCTGGCTCCTCTACCAGGGGACCTGG	710
Db	818	AGCTATGAGCTGCAGGTGCGGGCAGGGCCCATGCCTGGCTCCTCTACCAGGGGACCTGG	877
Qy	711	AGTGAATGGAGTGACCCGGTCATCTTTCAGACCCAGTCAGAGGAGTTAAAGGAAGGCTGG	770
Db	878	AGTGAATGGAGTGACCCGGTCATCTTTCAGACCCAGTCAGAGGAGTTAAAGGAAGGCTGG	937
Qy	771	AACCCCTACCTGCTGCTTCTCCTCCTGCTTGTCTAGTCTTCATTCTGCCTTCTGGAGC	830
Db	938	AACCCCTACCTGCTGCTTCTCCTCCTGCTTGTCTAGTCTTCATTCTGCCTTCTGGAGC	997
Qy	831	CTGAAGACCCATCCATTGTGGAGGCTATGGAAGAAGATATGGGCCGTCCCCAGCCCTGAG	890
Db	998	CTGAAGACCCATCCATTGTGGAGGCTATGGAAGAAGATATGGGCCGTCCCCAGCCCTGAG	1057
Qy	891	CGGTTCTTCATGCCCCCTGTACAAGGGCTGCAGCGGAGACTTCAAGAAATGGGTGGGTGCA	950
Db	1058	CGGTTCTTCATGCCCCCTGTACAAGGGCTGCAGCGGAGACTTCAAGAAATGGGTGGGTGCA	1117
Qy	951	CCCTTCACTGGCTCCAGCCTGGAGCTGGGACCCTGGAGCCCAGAGGTGCCCTCCACCCTG	1010
Db	1118	CCCTTCACTGGCTCCAGCCTGGAGCTGGGACCCTGGAGCCCAGAGGTGCCCTCCACCCTG	1177
Qy	1011	GAGGTGTACAGCTGCCACCCACCACGGAGCCCGGCCAAGAGGCTGCAGCTCACGGAGCTA	1070
Db	1178	GAGGTGTACAGCTGCCACCCACCACGGAGCCCGGCCAAGAGGCTGCAGCTCACGGAGCTA	1237
Qy	1071	CAAGAACCAGCAGAGCTGGTGGAGTCTGACGGTGTGCCCAAGCCCAGCTTCTGGCCGACA	1130
Db	1238	CAAGAACCAGCAGAGCTGGTGGAGTCTGACGGTGTGCCCAAGCCCAGCTTCTGGCCGACA	1297
Qy	1131	GCCCAGAACTCGGGGGGCTCAGCTTACAGTGAGGAGAGGGATCGGCCATACGGCCTGGTG	1190
Db	1298	GCCCAGAACTCGGGGGGCTCAGCTTACAGTGAGGAGAGGGATCGGCCATACGGCCTGGTG	1357
Qy	1191	TCCATTGACACAGTGACTGTGCTAGATGCAGAGGGGCCATGCACCTGGCCCTGCAGCTGT	1250
Db	1358	TCCATTGACACAGTGACTGTGCTAGATGCAGAGGGGCCATGCACCTGGCCCTGCAGCTGT	1417
Qy	1251	GAGGATGACGGCTACCCAGCCCTGGACCTGGATGCTGGCCTGGAGCCCAGCCCAGGCCTA	1310
Db	1418	GAGGATGACGGCTACCCAGCCCTGGACCTGGATGCTGGCCTGGAGCCCAGCCCAGGCCTA	1477
Qy	1311	GAGGACCCACTCTTGATGCAGGGACCACAGTCCTGTCTGTGGCTGTGTCTCAGCTGGC	1370
Db	1478	GAGGACCCACTCTTGATGCAGGGACCACAGTCCTGTCTGTGGCTGTGTCTCAGCTGGC	1537
Qy	1371	AGCCCTGGGCTAGGAGGGCCCTGGGAAGCCTCCTGGACAGACTAAAGCCACCCCTTGCA	1430
Db	1538	AGCCCTGGGCTAGGAGGGCCCTGGGAAGCCTCCTGGACAGACTAAAGCCACCCCTTGCA	1597
Qy	1431	GATGGGGAGGACTGGGCTGGGGGACTGCCCTGGGGTGGCCGGTCACCTGGAGGGGTCTCA	1490
Db	1598	GATGGGGAGGACTGGGCTGGGGGACTGCCCTGGGGTGGCCGGTCACCTGGAGGGGTCTCA	1657
Qy	1491	GAGAGTGAGGCGGGCTACCCCTGGCCGGCCTGGATATGGACACGTTTGACAGTGGCTTT	1550
Db	1658	GAGAGTGAGGCGGGCTACCCCTGGCCGGCCTGGATATGGACACGTTTGACAGTGGCTTT	1717
Qy	1551	GTGGGCTCTGACTGCAGCAGCCCTGTGGAGTGTGACTTCACCAGCCCCGGGACGAAGGA	1610

Applicant's work App-Link AB

Db	1718		GTGGGCTCTGACTGCAGCAGCCCTGTGGAGTGTGACTTCACCAGCCCCGGGGACGAAGGA	1777
Qy	1611		CCCCCCCCGAGCTACCTCCGCCAGTGGGTGGTCATTCTCCGCCACTTTTCGAGCCCTGGA	1670
Db	1778		CCCCCCCCGAGCTACCTCCGCCAGTGGGTGGTCATTCTCCGCCACTTTTCGAGCCCTGGA	1837
Qy	1671		CCCCAGGCCAGCTAATGAGGCTGACTGGATGTCCAGAGCTGGCCAGGCCACTGGGCCCTG	1730
Db	1838		CCCCAGGCCAGCTAATGAGGCTGACTGGATGTCCAGAGCTGGCCAGGCCACTGGGCCCTG	1897
Qy	1731		AGCCAGAGACAAGGTCACCTGGGCTGTGATGTGAAGACACCTGCAGCCTTTGGTCTCCTG	1790
Db	1898		AGCCAGAGACAAGGTCACCTGGGCTGTGATGTGAAGACACCTGCAGCCTTTGGTCTCCTG	1957
Qy	1791		GATGGGCCTTTGAGCCTGATGTTTACAGTGTCTGTGTGTGTGTGTCATATGTGTGTGTG	1850
Db	1958		GATGGGCCTTTGAGCCTGATGTTTACAGTGTCTGTGTGTGTGTGTCATATGTGTGTGTG	2017
Qy	1851		TGCATATGCATGTGTGTGTGTGTGTGTCTTAGGTGCGCAGTGGCATGTCCACGTGTGT	1910
Db	2018		TGCATATGCATGTGTGTGTGTGTGTGTCTTAGGTGCGCAGTGGCATGTCCACGTGTGT	2077
Qy	1911		GTGTGATTGCACGTGCCTGTGGGCCTGGGATAATGCCCATGGTACTCCATGCATTACCT	1970
Db	2078		GTGTGATTGCACGTGCCTGTGGGCCTGGGATAATGCCCATGGTACTCCATGCATTACCT	2137
Qy	1971		GCCCTGTGCATGTCTGGACTCACGGAGCTCACCCATGTGCACAAGTGTGCACAGTAAACG	2030
Db	2138		GCCCTGTGCATGTCTGGACTCACGGAGCTCACCCATGTGCACAAGTGTGCACAGTAAACG	2197
Qy	2031		TGTTTGTGGTCAACAGATGACAACAGCCGTCTCCCTCCTAGGGTCTTGTGTTGCAAGTT	2090
Db	2198		TGTTTGTGGTCAACAGATGACAACAGCCGTCTCCCTCCTAGGGTCTTGTGTTGCAAGTT	2257
Qy	2091		GGTCCACAGCATCTCCGGGGCTTTGTGGGATCAGGGCATTGCCTGTGACTGAGGCGGAGC	2150
Db	2258		GGTCCACAGCATCTCCGGGGCTTTGTGGGATCAGGGCATTGCCTGTGACTGAGGCGGAGC	2317
Qy	2151		CCAGCCCTCCAGCGTCTGCCTCCAGGAGCTGCAAGAAGTCCATATTGTTCTTATCACCT	2210
Db	2318		CCAGCCCTCCAGCGTCTGCCTCCAGGAGCTGCAAGAAGTCCATATTGTTCTTATCACCT	2377
Qy	2211		GCCAACAGGAAGCGAAAGGGGATGGAGTGAGCCCATTGGTGACCTCGGGAATGGCAATTTT	2270
Db	2378		GCCAACAGGAAGCGAAAGGGGATGGAGTGAGCCCATTGGTGACCTCGGGAATGGCAATTTT	2437
Qy	2271		TTGGGCGGGCCCTGGACGAAGGTCTGAATCCCAGCTCTGATACCTTCTGGCTGTGCTACC	2330
Db	2438		TTGGGCGGGCCCTGGACGAAGGTCTGAATCCCAGCTCTGATACCTTCTGGCTGTGCTACC	2497
Qy	2331		TGAGCCAAAGTCGCCTCCCCTCTCTGGGCTAGAGTTTCCTTATCCAGACAGTGGGGAAGGC	2390
Db	2498		TGAGCCAAAGTCGCCTCCCCTCTCTGGGCTAGAGTTTCCTTATCCAGACAGTGGGGAAGGC	2557
Qy	2391		ATGACACACCTGGGGGAAATTGGCGATGTCACCCGTGTACGGTACGCAGCCCAGAGCAGA	2450
Db	2558		ATGACACACCTGGGGGAAATTGGCGATGTCACCCGTGTACGGTACGCAGCCCAGAGCAGA	2617
Qy	2451		CCCTCAATAAACGTCAGCTTCCTTC	2475

Appendix AS

Applicant's work

Db 2618 CCCTCAATAAACGTCAGCTTCCTTC 2642

RESULT 6

US-09-949-016-17415

; Sequence 17415, Application US/09949016

; Patent No. 6812339

; GENERAL INFORMATION:

; APPLICANT: VENTER, J. Craig et al.

; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF

; FILE REFERENCE: CL001307

; CURRENT APPLICATION NUMBER: US/09/949,016

; CURRENT FILING DATE: 2000-04-14

; PRIOR APPLICATION NUMBER: 60/241,755

; PRIOR FILING DATE: 2000-10-20

; PRIOR APPLICATION NUMBER: 60/237,768

; PRIOR FILING DATE: 2000-10-03

; PRIOR APPLICATION NUMBER: 60/231,498

; PRIOR FILING DATE: 2000-09-08

; NUMBER OF SEQ ID NOS: 207012

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 17415

; LENGTH: 27184

; TYPE: DNA

; ORGANISM: Human

US-09-949-016-17415

Query Match 67.1%; Score 1935.8; DB 3; Length 27184;

Best Local Similarity 99.5%; Pred. No. 0;

Matches 1952; Conservative 0; Mismatches 7; Indels 2; Gaps 1;

```

Qy      929 CTTCAAGAAATGGGTGGGTGCACCCTTCACTGGCTCCAGCCTGGAGCTGGGACCCTGGAG 988
      ||  |||
Db      23223 CTCACAGAAATGGGTGGGTGCACCCTTCACTGGCTCCAGCCTGGAGCTGGGACCCTGGAG 23282

Qy      989 CCCAGAGGTGCCCTCCACCCTGGAGGTGTACAGCTGCCACCCACCACGGAGCCCGGCCAA 1048
      |||
Db      23283 CCCAGAGGTGCCCTCCACCCTGGAGGTGTACAGCTGCCACCCACCACGGAGCCCGGCCAA 23342

Qy      1049 GAGGCTGCAGCTCACGGAGCTACAAGAACCAGCAGAGCTGGTGGAGTCTGACGGTGTGCC 1108
      |||
Db      23343 GAGGCTGCAGCTCACGGAGCTACAAGAACCAGCAGAGCTGGTGGAGTCTGACGGTGTGCC 23402

Qy      1109 CAAGCCCAGCTTCTGGCCGACAGCCCAGAACTCGGGGGGCTCAGCTTACAGTGAGGAGAG 1168
      |||
Db      23403 CAAGCCCAGCTTCTGGCCGACAGCCCAGAACTCGGGGGGCTCAGCTTACAGTGAGGAGAG 23462

Qy      1169 GGATCGGCCATACGGCCTGGTGTCCATTGACACAGTGAAGTGTGCTAGATGCAGAGGGGCC 1228
      |||
Db      23463 GGATCGGCCATACGGCCTGGTGTCCATTGACACAGTGAAGTGTGCTAGATGCAGAGGGGCC 23522

Qy      1229 ATGCACCTGGCCCTGCAGCTGTGAGGATGACGGCTACCCAGCCCTGGACCTGGATGCTGG 1288
      |||
Db      23523 ATGCACCTGGCCCTGCAGCTGTGAGGATGACGGCTACCCAGCCCTGGACCTGGATGCTGG 23582

Qy      1289 CCTGGAGCCCAGCCCAGGCCTAGAGGACCCACTCTTGGATGCAGGGACCACAGTCCTGTC 1348
      |||
Db      23583 CCTGGAGCCCAGCCCAGGCCTAGAGGACCCACTCTTGGATGCAGGGACCACAGTCCTGTC 23642

Qy      1349 CTGTGGCTGTGTCTCAGCTGGCAGCCCTGGGCTAGGAGGGCCCTGGGAAGCCTCCTGGA 1408

```

Appendix B1

Application

```

Db      1261 GCAGGGACCACAGTCCTGTCTGTGGCTGTGTCTCAGCTGGCAGCCCTGGGCTAGGAGGG 1320

Qy      441 ProLeuGlySerLeuLeuAspArgLeuLysProProLeuAlaAspGlyGluAspTrpAla 460
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1321 CCCCTGGGAAGCCTCCTGGACAGACTAAAGCCACCCCTTGACAGATGGGGAGGACTGGGCT 1380

Qy      461 GlyGlyLeuProTrpGlyGlyArgSerProGlyGlyValSerGluSerGluAlaGlySer 480
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1381 GGGGGACTGCCCTGGGGTGGCCGGTCACCTGGAGGGGTCTCAGAGAGTGAGGCGGGCTCA 1440

Qy      481 ProLeuAlaGlyLeuAspMetAspThrPheAspSerGlyPheValGlySerAspCysSer 500
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1441 CCCCTGGCCGGCCTGGATATGGACACGTTTGACAGTGGCTTTGTGGGCTCTGACTGCAGC 1500

Qy      501 SerProValGluCysAspPheThrSerProGlyAspGluGlyProProArgSerTyrLeu 520
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1501 AGCCCTGTGGAGTGTGACTTCACCAGCCCCGGGGACGAAGACCCCCCGGAGCTACCTC 1560

Qy      521 ArgGlnTrpValValIleProProProLeuSerSerProGlyProGlnAlaSer 538
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1561 CGCCAGTGGGTGGTCATTCTCCGCCACTTTCGAGCCCTGGACCCAGGCCAGC 1614

```

RESULT 6

US-09-040-005-1

; Sequence 1, Application US/09040005

; Patent No. 6057128

; GENERAL INFORMATION:

; APPLICANT: Donaldson, Debra

; APPLICANT: Unger, Michelle

; TITLE OF INVENTION: MU-1 RECEPTOR

; NUMBER OF SEQUENCES: 8

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Genetics Institute, Inc.

; STREET: 87 CmabridgePark Drive

; CITY: Cambridge

; STATE: MA

; COUNTRY: USA

; ZIP: 02140

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/040,005

; FILING DATE:

; CLASSIFICATION:

; ATTORNEY/AGENT INFORMATION:

; NAME: Brown, Scott A

; REGISTRATION NUMBER: 32,724

; REFERENCE/DOCKET NUMBER: GI5320

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-498-8224

; TELEFAX: 617-876-5851

; INFORMATION FOR SEQ ID NO: 1:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 2665 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: double

; TOPOLOGY: linear

; MOLECULE TYPE: cDNA

Appendix B 2

Application

US-09-040-005-1

Alignment Scores:

Pred. No.:	1.32e-249	Length:	2665
Score:	2958.00	Matches:	538
Percent Similarity:	100.0%	Conservative:	0
Best Local Similarity:	100.0%	Mismatches:	0
Query Match:	100.0%	Indels:	0
DB:	3	Gaps:	0

US-10-715-998-2 (1-538) x US-09-040-005-1 (1-2665)

Qy	1	MetProArgGlyTrpAlaAlaProLeuLeuLeuLeuLeuLeuGlnGlyGlyTrpGlyCys	20
Db	236	ATGCCGCGTGGCTGGGCCCGCCCTTGCTCCTGCTGCTGCCAGGGAGGCTGGGGCTGC	295
Qy	21	ProAspLeuValCysTyrThrAspTyrLeuGlnThrValIleCysIleLeuGluMetTrp	40
Db	296	CCCAGCTCGTCTGCTACACCGATTACCTCCAGACGGTCATCTGCATCCTGGAAATGTGG	355
Qy	41	AsnLeuHisProSerThrLeuThrLeuThrTrpGlnAspGlnTyrGluGluLeuLysAsp	60
Db	356	AACCTCCACCCAGCACGCTCACCTTACCTGGCAAGACCAGTATGAAGAGCTGAAGGAC	415
Qy	61	GluAlaThrSerCysSerLeuHisArgSerAlaHisAsnAlaThrHisAlaThrTyrThr	80
Db	416	GAGGCCACCTCCTGCAGCCTCCACAGGTGCGCCCAATGCCACGCATGCCACCTACACC	475
Qy	81	CysHisMetAspValPheHisPheMetAlaAspAspIlePheSerValAsnIleThrAsp	100
Db	476	TGCCACATGGATGTATTCCACTTCATGGCCGACGACATTTTCAGTGTCAACATCACAGAC	535
Qy	101	GlnSerGlyAsnTyrSerGlnGluCysGlySerPheLeuLeuAlaGluSerIleLysPro	120
Db	536	CAGTCTGGCAACTACTCCAGGAGTGTGGCAGCTTCTCCTGGCTGAGAGCATCAAGCCG	595
Qy	121	AlaProProPheAsnValThrValThrPheSerGlyGlnTyrAsnIleSerTrpArgSer	140
Db	596	GCTCCCCCTTTCAACGTGACTGTGACCTTCTCAGGACAGTATAATATCTCCTGGCGCTCA	655
Qy	141	AspTyrGluAspProAlaPheTyrMetLeuLysGlyLysLeuGlnTyrGluLeuGlnTyr	160
Db	656	GATTACGAAGACCTGCCTTCTACATGCTGAAGGGCAAGCTTCAGTATGAGCTGCAGTAC	715
Qy	161	ArgAsnArgGlyAspProTrpAlaValSerProArgArgLysLeuIleSerValAspSer	180
Db	716	AGGAACCGGGGAGACCCCTGGGCTGTGAGTCCGAGGAGAAAGCTGATCTCAGTGGACTCA	775
Qy	181	ArgSerValSerLeuLeuProLeuGluPheArgLysAspSerSerTyrGluLeuGlnVal	200
Db	776	AGAAGTGTCTCCCTCCTCCCCCTGGAGTTCGCAAGACTCGAGCTATGAGCTGCAGGTG	835
Qy	201	ArgAlaGlyProMetProGlySerSerTyrGlnGlyThrTrpSerGluTrpSerAspPro	220
Db	836	CGGGCAGGGCCCATGCCTGGCTCCTCCTACCAGGGGACCTGGAGTGAATGGAGTGACCCG	895
Qy	221	ValIlePheGlnThrGlnSerGluGluLeuLysGluGlyTrpAsnProHisLeuLeuLeu	240
Db	896	GTCATCTTTCAGACCCAGTCAGAGGAGTTAAAGGAAGGCTGGAACCCTCACCTGCTGCTT	955
Qy	241	LeuLeuLeuLeuValIleValPheIleProAlaPheTrpSerLeuLysThrHisProLeu	260

Appendix B3

Application wpy

Db	956	CTCCTCCTGCTTGTTCATAGTCTTCATTCTGCCTTCTGGAGCCTGAAGACCCATCCATTG	1015
Qy	261	TrpArgLeuTrpLysLysIleTrpAlaValProSerProGluArgPhePheMetProLeu	280
Db	1016	TGGAGGCTATGGAAGAAGATATGGGCCGTCCCCAGCCCTGAGCGGTTCTTCATGCCCTG	1075
Qy	281	TyrLysGlyCysSerGlyAspPheLysLysTrpValGlyAlaProPheThrGlySerSer	300
Db	1076	TACAAGGGCTGCAGCGGAGACTTCAAGAAATGGGTGGGTGCACCCTTCACTGGCTCCAGC	1135
Qy	301	LeuGluLeuGlyProTrpSerProGluValProSerThrLeuGluValTyrSerCysHis	320
Db	1136	CTGGAGCTGGGACCCTGGAGCCCAGAGGTGCCCTCCACCCTGGAGGTGTACAGCTGCCAC	1195
Qy	321	ProProArgSerProAlaLysArgLeuGlnLeuThrGluLeuGlnGluProAlaGluLeu	340
Db	1196	CCACCACGGAGCCCGGCCAAGAGGCTGCAGCTCACGGAGCTACAAGAACCAGCAGAGCTG	1255
Qy	341	ValGluSerAspGlyValProLysProSerPheTrpProThrAlaGlnAsnSerGlyGly	360
Db	1256	GTGGAGTCTGACGTTGTGCCCAAGCCCAGCTTCTGGCCGACAGCCCAGAACTCGGGGGGC	1315
Qy	361	SerAlaTyrSerGluGluArgAspArgProTyrGlyLeuValSerIleAspThrValThr	380
Db	1316	TCAGCTTACAGTGAGGAGAGGGATCGGCCATACGGCCTGGTGTCCATTGACACAGTGACT	1375
Qy	381	ValLeuAspAlaGluGlyProCysThrTrpProCysSerCysGluAspAspGlyTyrPro	400
Db	1376	GTGCTAGATGCAGAGGGGCCATGCACCTGGCCCTGCAGCTGTGAGGATGACGGCTACCCA	1435
Qy	401	AlaLeuAspLeuAspAlaGlyLeuGluProSerProGlyLeuGluAspProLeuLeuAsp	420
Db	1436	GCCCTGGACCTGGATGCTGGCCTGGAGCCCAGCCCAGGCCTAGAGGACCCACTCTTGGAT	1495
Qy	421	AlaGlyThrThrValLeuSerCysGlyCysValSerAlaGlySerProGlyLeuGlyGly	440
Db	1496	GCAGGGACCACAGTCCTGTCTGTGGCTGTGTCTCAGCTGGCAGCCCTGGGCTAGGAGGG	1555
Qy	441	ProLeuGlySerLeuLeuAspArgLeuLysProProLeuAlaAspGlyGluAspTrpAla	460

[start](#) | [next page](#)

SCORE 1.3 BuildDate: 11/17/2006

Apparatus B4

Application

SCORE Search Results Details for Application 10715998 and Search Result \$itemName.

[Score Home Page](#) [Retrieve Application List](#) [SCORE System Overview](#) [SCORE FAQ](#) [Comments / Suggestions](#)

This page gives you Search Results detail for the Application 10715998 and Search Result \$itemName. [start](#) | [next page](#)

[Go Back to](#)

```

Db      1556  CCCCTGGGAAGCCTCCTGGACAGACTAAAGCCACCCCTTGCAGATGGGGAGGACTGGGCT 1615
Qy      461  GlyGlyLeuProTrpGlyGlyArgSerProGlyGlyValSerGluSerGluAlaGlySer 480
      |||
Db      1616  GGGGGACTGCCCTGGGGTGGCCGGTCACCTGGAGGGGTCTCAGAGAGTGAGGCGGGCTCA 1675
Qy      481  ProLeuAlaGlyLeuAspMetAspThrPheAspSerGlyPheValGlySerAspCysSer 500
      |||
Db      1676  CCCCTGGCCGGCCTGGATATGGACACGTTTGACAGTGGCTTTGTGGGCTCTGACTGCAGC 1735
Qy      501  SerProValGluCysAspPheThrSerProGlyAspGluGlyProProArgSerTyrLeu 520
      |||
Db      1736  AGCCCTGTGGAGTGTGACTTCACCAGCCCCGGGGACGAAGACCCCCCGGAGCTACCTC 1795
Qy      521  ArgGlnTrpValValIleProProProLeuSerSerProGlyProGlnAlaSer 538
      |||
Db      1796  CGCCAGTGGGTGGTCATTCTCCGCCACTTTCGAGCCCTGGACCCAGGCCAGC 1849

```

RESULT 7

US-09-404-641-1

; Sequence 1, Application US/09404641

; Patent No. 6576744

GENERAL INFORMATION:

; APPLICANT: Presnell, Scott R.

; APPLICANT: Conklin, Darrell C.

; APPLICANT: No. 6576744ak, Julia E.

; APPLICANT: Hammond, Angela K.

; TITLE OF INVENTION: CYTOKINE RECEPTOR ZAPLHA11

; FILE REFERENCE: 98-55

; CURRENT APPLICATION NUMBER: US/09/404,641

; CURRENT FILING DATE: 1999-09-23

; PRIOR APPLICATION NUMBER: US 60/100,896

; PRIOR FILING DATE: 1998-09-23

; PRIOR APPLICATION NUMBER: US 60/123,546

; PRIOR FILING DATE: 1999-03-09

; PRIOR APPLICATION NUMBER: US 60/142,574

; PRIOR FILING DATE: 1999-07-06

; NUMBER OF SEQ ID NOS: 91

; SOFTWARE: FastSEQ for Windows Version 3.0

; SEQ ID NO 1

; LENGTH: 2887

; TYPE: DNA

; ORGANISM: Homo sapiens

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (69)...(1682)

US-09-404-641-1